

WHAT IS CLAIMED IS:

1 1. For use in a wireless communication system comprising
2 a plurality of base stations, each of which is capable of
3 communicating with a plurality of mobile stations within a base
4 station coverage area, an apparatus for setting up a call from a
5 mobile station, wherein the apparatus comprises:

6 a base station that sets up said call from said mobile station
7 by receiving an origination message from said mobile station;

8 wherein said base station sends null frames on a forward
9 traffic channel to said mobile station to verify that said forward
10 traffic channel is reliable instead of sending a base station
11 acknowledgment order to said mobile station to verify that said
12 forward traffic channel is reliable; and

13 wherein said base station receives a traffic channel preamble
14 from said mobile station on a reverse traffic channel to said base
15 station to verify that said reverse traffic channel is reliable
16 instead of receiving a mobile station acknowledgement order from
17 said mobile station to verify that said reverse traffic channel is
18 reliable.

1 2. The apparatus as set forth in Claim 1 wherein:
2 said base station sends to said mobile station a specified
3 number of traffic channel preambles for said mobile station to send
4 to said base station before said mobile station goes to a traffic
5 channel.

1 3. The apparatus as set forth in Claim 2 wherein said base
2 station sends said specified number of traffic channel preambles to
3 said mobile station in one of a channel assignment message and an
4 extended channel assignment message.

1 4. The apparatus as set forth in Claim 3 wherein said base
2 station sends a mode of operation indicator to said mobile station
3 to cause said mobile station to send a specified number of traffic
4 channel preambles to said mobile station before said mobile station
5 goes to a traffic channel, wherein said base station sends said
6 mode of operation indicator to said mobile station in one of a
7 channel assignment message and an extended channel assignment
8 message.

1 5. The apparatus as set forth in Claim 1 wherein:
2 said base station sends to said mobile station a specified
3 number of traffic channel preambles for said mobile station to send
4 to said base station before said mobile station goes to a traffic
5 channel; and
6 said base station sends a base station acknowledgement order
7 to said mobile station before said mobile station has sent the
8 specified number of traffic channel preambles to said base station.

1 6. The apparatus as set forth in Claim 5 wherein said base
2 station sends said specified number of traffic channel preambles to
3 said mobile station in one of a channel assignment message and an
4 extended channel assignment message.

1 7. The apparatus as set forth in Claim 6 wherein:

2 said base station sends a mode of operation indicator to said
3 mobile station to cause said mobile station 1) to send a specified
4 number of traffic channel preambles to said mobile station before
5 said mobile station goes to a traffic channel, and 2) to enter a
6 traffic channel when said mobile station receives a base station
7 acknowledgement order from said base station before said mobile
8 station has sent the specified number of traffic channel preambles
9 to said base station; and

10 wherein said base station sends said mode of operation
11 indicator to said mobile station in one of a channel assignment
12 message and an extended channel assignment message.

1 8. The apparatus as set forth in Claim 1 wherein:

2 said base station sends a traffic channel preamble to said
3 mobile station on a forward traffic channel after said base station
4 has sent one of a channel assignment message and an extended
5 channel assignment message to said mobile station, wherein said
6 traffic channel preamble verifies that said forward traffic channel
7 is reliable; and

8 said base station receives null frames from said mobile
9 station on a reverse traffic channel after said base station has
10 sent said traffic channel preamble to said mobile station, wherein
11 said null frames verify that said reverse traffic channel is
12 reliable.

1 9. The apparatus as set forth in Claim 1 wherein:

2 said base station sets up a call to terminate on said mobile
3 station by sending null frames on a forward traffic channel to said
4 mobile station to verify that said forward traffic channel is
5 reliable instead of sending a base station acknowledgment order to
6 said mobile station to verify that said forward traffic channel is
7 reliable.

1 10. The apparatus as set forth in Claim 9 wherein:
2 wherein said base station sets up a call to terminate on said
3 mobile station by receiving a traffic channel preamble from said
4 mobile station on a reverse traffic channel to said base station to
5 verify that said reverse traffic channel is reliable instead of
6 receiving a mobile station acknowledgement order from said mobile
7 station to verify that said reverse traffic channel is reliable.

1 11. The apparatus as claimed in Claim 1 wherein said base
2 station sets up said call from said mobile station in approximately
3 two hundred milliseconds.

1 12. The apparatus as claimed in Claim 9 wherein said base
2 station sets up said call to terminate on said mobile station in
3 approximately three hundred milliseconds.

1 13. For use in a wireless communication system comprising
2 a plurality of base stations, each of which is capable of
3 communicating with a plurality of mobile stations within a base
4 station coverage area, a method for setting up a call from a mobile
5 station, wherein the method comprises the steps of:

6 receiving an origination message from said mobile station in a
7 base station;

8 sending null frames from said base station on a forward
9 traffic channel to said mobile station to verify that said forward
10 traffic channel is reliable instead of sending a base station
11 acknowledgment order to said mobile station to verify that said
12 forward traffic channel is reliable; and

13 receiving a traffic channel preamble in said base station from
14 said mobile station on a reverse traffic channel to said base
15 station to verify that said reverse traffic channel is reliable
16 instead of receiving a mobile station acknowledgement order from
17 said mobile station to verify that said reverse traffic channel is
18 reliable.

1 14. The method as set forth in Claim 13 further comprising
2 the step of:

3 sending from said base station to said mobile station a
4 specified number of traffic channel preambles for said mobile
5 station to send to said base station before said mobile station
6 goes to a traffic channel.

1 15. The method as set forth in Claim 14 further comprising
2 the step of sending said specified number of traffic channel
3 preambles from said base station to said mobile station in one of a
4 channel assignment message and an extended channel assignment
5 message.

1 16. The method as set forth in Claim 15 further comprising
2 the steps of:

3 sending a mode of operation indicator from said base station
4 to said mobile station to cause said mobile station to send a
5 specified number of traffic channel preambles to said mobile
6 station before said mobile station goes to a traffic channel; and
7 sending said mode of operation indicator from said base
8 station to said mobile station in one of a channel assignment
9 message and an extended channel assignment message.

1 17. The method as set forth in Claim 13 further comprising
2 the steps of:

3 sending from said base station to said mobile station a
4 specified number of traffic channel preambles for said mobile
5 station to send to said base station before said mobile station
6 goes to a traffic channel; and

7 sending a base station acknowledgement order from said base
8 station to said mobile station before said mobile station has sent
9 the specified number of traffic channel preambles to said base
10 station.

1 18. The method as set forth in Claim 17 further comprising
2 the step of:

3 sending said specified number of traffic channel preambles
4 from said base station to said mobile station in one of a channel
5 assignment message and an extended channel assignment message.

1 19. The method as set forth in Claim 18 further comprising
2 the steps of:

3 sending a mode of operation indicator from said base station
4 to said mobile station to cause said mobile station 1) to send a
5 specified number of traffic channel preambles to said mobile
6 station before said mobile station goes to a traffic channel, and
7 2) to enter a traffic channel when said mobile station receives a
8 base station acknowledgement order from said base station before
9 said mobile station has sent the specified number of traffic
10 channel preambles to said base station; and

11 sending said mode of operation indicator from said base
12 station to said mobile station in one of a channel assignment
13 message and an extended channel assignment message.

1 20. The method as set forth in Claim 13 further comprising
2 the steps of:

3 sending a traffic channel preamble from said base station to
4 said mobile station on a forward traffic channel after said base
5 station has sent one of a channel assignment message and an
6 extended channel assignment message to said mobile station;

7 verifying with said traffic channel preamble that said forward
8 traffic channel is reliable;

9 receiving null frames in said base station from said mobile
10 station on a reverse traffic channel after said base station has
11 sent said traffic channel preamble to said mobile station; and

12 verifying with said null frames that said reverse traffic
13 channel is reliable.

1 21. The method as set forth in Claim 13 further comprising
2 the steps of:

3 setting up a call to terminate on said mobile station by
4 receiving in said base station a paging request message from a
5 mobile switching center; and

6 sending null frames from said base station on a forward
7 traffic channel to said mobile station to verify that said forward
8 traffic channel is reliable instead of sending a base station
9 acknowledgment order to said mobile station to verify that said
10 forward traffic channel is reliable.

1 22. The method as set forth in Claim 21 further comprising
2 the step of:

3 receiving a traffic channel preamble in said base station from
4 said mobile station on a reverse traffic channel to said base
5 station to verify that said reverse traffic channel is reliable
6 instead of receiving a mobile station acknowledgement order from
7 said mobile station to verify that said reverse traffic channel is
8 reliable.

1 23. The method as set forth in Claim 13 wherein said base
2 station sets up said call from said mobile station in approximately
3 two hundred milliseconds.

1 24. The method as set forth in Claim 21 wherein said base
2 station sets up said call to terminate on said mobile station in
3 approximately three hundred milliseconds.

1 25. For use in a wireless communication system comprising
2 a plurality of base stations, each of which is capable of
3 communicating with a plurality of mobile stations within a base
4 station coverage area, an apparatus for setting up a call from a
5 mobile station, wherein the apparatus comprises:

6 a mobile station that sets up said call from said mobile
7 station by sending an origination message to said base station;

8 wherein said mobile station receives null frames on a forward
9 traffic channel from said base station to verify that said forward
10 traffic channel is reliable instead of receiving a base station
11 acknowledgment order from said base station to verify that said
12 forward traffic channel is reliable; and

13 wherein said mobile station sends a traffic channel preamble
14 on a reverse traffic channel to said base station to verify that
15 said reverse traffic channel is reliable instead of sending a
16 mobile station acknowledgement order from said mobile station to
17 verify that said reverse traffic channel is reliable.

1 26. The apparatus as claimed in Claim 25 wherein said mobile
2 station receives from said base station a specified number of
3 traffic channel preambles to send to said base station before said
4 mobile station goes to a traffic channel.

1 27. The apparatus as claimed in Claim 26 wherein said mobile
2 station receives from said base station a mode of operation
3 indicator to cause said mobile station to send a specified number
4 of traffic channel preambles to said base station before said
5 mobile station goes to a traffic channel.

1 28. The apparatus as claimed in Claim 27 wherein said mobile
2 station receives from said base station a mode of operation
3 indicator to cause said mobile station to go to a traffic channel
4 when said mobile station receives a base station acknowledgment
5 order from said base station before said mobile station has sent
6 the specified number of traffic channel preambles to said base
7 station.

1 29. The apparatus as claimed in Claim 25 wherein said mobile
2 station sets up a call to terminate on said mobile station by
3 receiving null frames on a forward traffic channel from said base
4 station to verify that said forward traffic channel is reliable
5 instead of receiving a base station acknowledgement order from said
6 base station to verify that said forward traffic channel is
7 reliable.

1 30. The apparatus as claimed in Claim 29 wherein said mobile
2 station sets up a call to terminate on said mobile station by
3 sending a traffic channel preamble to said base station on a
4 reverse traffic channel from said mobile station to verify that
5 said reverse traffic channel is reliable instead of sending a
6 mobile station acknowledgement order from said mobile station to
7 said base station to verify that said reverse traffic channel is
8 reliable.